REMARKS

Status of claims

Claims 1–34 were pending in the application prior to entry of the foregoing amendment. Claims 1-6, 8, 10-31 and 33 were rejected and claims 7, 9, 32 and 34 were found to contain allowable subject matter. Claims 7, 9, 32 and 34 have been amended to correct misspellings (the respective scopes of the claims have not been affected.) Claims 1-34 therefore remain pending in the application.

§102 rejections

The Examiner rejects claims 1-3, 6, 14-16, 22-24, 26-28 and 31 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,509,020 to Iwakiri, et al. ("Iwakiri"). The Applicant respectfully traverses these rejections.

In order to anticipate a claim, a prior art reference must disclose all of the limitations of the claim. M.P.E.P. 2131. These limitations must be shown in as complete detail as is contained in the claim, and the elements must be arranged as required by the claim. *Id.* Because the Examiner has not shown that these criteria are met by the Iwakiri reference, the Examiner has failed to meet the burden of showing that claim 1 is anticipated by this reference.

The Examiner states that Iwakiri teaches "said rate decision [block determining a plurality of frame energies for said sequence of code symbols, each of said plurality of frame energies corresponding to one of a plurality of tentative frame rates; said rate decision block determining at least one final frame rate when said plurality of frame energies meet a] desired condition" (citing Fig. 3 and col. 6, line 13 through col. 7, line 44, and the estimation of Eb/NO). Iwakiri discloses that Eb/NO is the transmission energy per noise of the bit unit (col. 6, lines 35-37), rather than a frame energy, as recited in the claim. Further, Eb/NO is estimated "on the basis of the normalized symbol error rate ... and the path metric amount average value" (col. 6, line 66 through col. 7, line 2), rather than for a sequence of code symbols, as also recited in the claim. Thus, the Eb/NO metric of Iwakiri is a generalized measure instead of a specific frame energy metric, where each frame energy corresponds to one of the tentative frame rates. Still further, the Eb/NO metric is estimated (Fig. 3, element 26) for the purpose of

allowing a threshold value setting unit 23 to provide a threshold value table to threshold value memory unit 27 (see col. 6, lines 21-50), and not for the purpose of determining a final frame rate based on the metric meeting a desired condition, as recited in the claim.

It is therefore apparent that Iwakiri does not meet the requirements specified in M.P.E.P. 2131 for anticipation of claim 1. Accordingly, the Applicant believes the Examiner's rejection of claim 1 has been overcome. The Applicant points out that independent claims 14, 22 and 26 have limitations to those discussed above with respect to claim 1. These limitations are not disclosed by Iwakiri for the same reasons set forth above. Accordingly, the Examiner's rejections of these claims are believed to have been overcome as well. Likewise, all of the claims that depend from claims 1, 14, 22 and 26 include these limitations and are distinguished from Iwakiri as discussed above.

While the various dependent claims are distinguished from Iwakiri for the foregoing reasons, they are distinguished on other grounds as well. For example, the Examiner states in regard to claims 6 and 31 that Iwakiri teaches a method "wherein [said desired condition indicates whether a combination of said plurality of frame energies exceeds a] threshold energy," (citing col. 3, lines 18-36 and col. 6, line 35 through col. 7, line 3). In fact, Iwakiri teaches the use of threshold values for symbol error rates or path metric amounts (col. 2, lines 52-60), but not for frame energies. Iwakiri certainly teaches nothing about combining frame energies and determining whether the combined energies exceed a threshold. Claims 6 and 31 are therefore clearly distinguished from Iwakiri on this basis as well.

For at least the foregoing reasons, the Applicant respectfully submits that all of the Examiner's rejections under 35 U.S.C. 102 have been overcome.

§103 rejections

The Examiner rejects claims 4, 17, 25 and 29 under 35 U.S.C. 103(a) as being unpatentable over Iwakiri. The Examiner rejects claims 5, 8, 30 and 33 under 35 U.S.C. 103(a) as being unpatentable over Iwakiri in view of U.S. Patent No. 6,560,744 to Burshtein ("Burshtein"). The Examiner rejects claims 10-13 and 18-21 under 35 U.S.C. 103(a) as being unpatentable over Iwakiri in view of U.S. Patent No. 6,480,556 to Guey ("Guey"). The Applicant respectfully traverses these rejections.

MPEP 2143 states:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The Applicant respectfully submits that the Examiner has failed to meet one or more of these criteria and has therefore failed to make a *prima facie* case of obviousness for each of the claims.

Missing limitations

All of the Examiner's rejections under 35 U.S.C. 103 rely upon Iwakiri. As discussed above, Iwakiri does not teach the limitations of determining frame energies for corresponding to the tentative frame rates or determining a final frame rate when the frame energies meet a desired condition. The additional references cited by the Examiner (Burshtein, Guey) do not remedy these deficiencies, and are not asserted by the Examiner to do so. These limitations are included in various forms in all of the claims rejected under 35 U.S.C. 103. Consequently, for the same reasons set forth above with respect to 35 U.S.C. 102, these limitations of the claims are not taught by the references.

In addition to the deficiencies of Iwakiri, there are other limitations that are not taught by the references. For instance, in regard to claims 5, 8, 30 and 33, the Examiner asserts that the limitation added by these claims, admittedly missing from Iwakiri, is taught by Burshtein. The Examiner, however, merely makes the conclusory statement that "utilization of a pilot energy is known in the art" (citing Burshtein, col. 10, lines 58-60). The claims, on the other hand, do not recite the mere utilization of pilot energy – they recite determining the final frame rate when the frame energies and a pilot channel energy meet a desired condition. This is not taught by Burshtein.

In regard to the limitation of claims 10-13 and 18-21, the Examiner admits that the limitation is not taught by Iwakiri, but asserts that it is taught by Guey. Again, the Examiner is

conclusory in stating that "such use of the Yamamoto quality in rate detection is known in the art" (citing Guey, col. 1, lines 58-65). While Guey does teach that the Yamamoto quality can be used in rate detection, it does not teach that the Yamamoto quality is used in the manner recited in the claim (i.e., determined for each tentative frame rate and used in conjunction with frame energies for each tentative frame rate to determine a final frame rate). Thus, the limitation of the claim (as opposed to a different use of the Yamamoto quality) is not taught by Guey.

For at least these reasons, the third criterion of M.P.E.P. 2143, that each of the limitations of the claims must be taught by the references, is not met.

Suggestion/motivation to combine references

The Applicant respectfully submits that the Examiner has also failed to show that the second criterion of M.P.E.P. 2143 is met. In other words, with respect to the combination of Iwakiri with either Burshtein or Guey, the Examiner has not shown that there is any suggestion or motivation in the references that they should be combined in the manner suggested by the Examiner to arrive at the claimed invention. The Examiner has only pointed out that the references are in the same field of endeavor and could be combined. The mere fact that references can be combined, however, does not render the combination obvious unless the prior art also suggests the desirability of the combination. M.P.E.P. 2143.01. Similarly, it is not sufficient to merely state that it would have been within the ordinary level of skill in the art to make the combination. *Id.* Because the Examiner has not pointed out any teaching or suggestion in the references indicating that they should be combined, and has not provided any other explanation as to why the references should be combined, the Examiner has failed to meet the second criterion of M.P.E.P. 2143.

The Applicant therefore respectfully submits that since at least the second and third criteria of M.P.E.P. 2143 have not been met, the Examiner has failed to make a *prima facie* case of obviousness under 35 U.S.C. 103. The rejections of the claims under 35 U.S.C. 103(a) are therefore improper, and the Applicant requests that they be withdrawn.

Allowable subject matter

The Applicant notes that the Examiner has indicated the allowability of the subject matter of claims 7, 9, 32 and 34. Because the Applicant believes the claims from which these claims depend are allowable, claims 7, 9, 32 and 34 have not been amended as suggested by the Examiner to put them in independent form and to include all the limitations of the base and intervening claims. The Applicant notes that claims 7, 9, 32 and 34 have, however, been amended to correct the misspelling of the word "multiplications."

REQUEST FOR ALLOWANCE

In view of the foregoing, the Applicant submits that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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